FOCUS

Safety Officer's PMA

By Capt. C. A. Hase, OpNav

After only two months on the job as safety officer, I was faced with a phased maintenance availability (PMA), or mini-overhaul, as some call it. The biggest advantage of a PMA is that the Navy can fix a ship's major ailments in less time and with fewer dollars than a regular overhaul entails.

As I learned, though, a shortened yard period in no way lightened my responsibilities. The same hazards that exist during regular overhauls also apply to PMAs.

Before our PMA started, I visited the Naval Safety Center and got a copy of the "Guide to Safety in an Availability" *[now available online at http://safetycenter.navy.mil/afloat/surface/downloads/availabilityguide.doc]*.

Navy photo by MC2 Stefanie Broughton

A submarine tender undergoes a four-month phased maintenance availability.

A Survival Kit

Preparation

Start PMA preparations six to eight weeks before entering the shipyard. Your task is to educate ship's personnel about a completely different environment, which may mean establishing new habits—something that isn't easy to do.

Hold a series of safety stand-downs during this time. Tagout, hot-work, and gas-free programs, along with trip and hanging hazards, are good topics to review. Ensure that shipyard policy in these areas is in line with the Navy's policy. You also should cover ladder and trunk safety, as well as traffic and recreational safety.

We made a videotape for the crew, giving directions to the shipyard and showing where to park, how to get to the pier, and precautions to observe on the way to work. Evaluate the time change in working hours and how it will relate to traffic mishaps. These kinds of tips are helpful since the shipyard may be located in a different city than the ship's home port.

Walking through an industrial area to get to work is a new experience for some. You may have to wear hard hats and safety goggles and follow a traffic lane to get to and from work. You'll probably have to order extra supplies of hard hats, goggles, and hearing protection.

You'll also need more fire-watch equipment, starting with different goggles for gas and arc welding, welding respirators, and extra CO_2 bottles. There's always a temptation to use existing mounted CO_2 bottles, but it's a bad idea to give in to this temptation. First, it's too convenient to put a partly discharged bottle back on the bulkhead. Second, if a fire breaks out aboard the ship and someone needs a CO_2 bottle, they may find it empty or missing. Finally, it's comforting to know that if an extra fire bottle is needed, a backup is available on the bulkhead.

Shipboard fires are the biggest threat during a PMA. How well you combat that threat depends on organization, training and motivation. Many PMA contracts are written so the ship provides fire watches for all welding jobs. If your work package contains a lot of welding, ship's company outside the HT rating may have to supplement the contractor's fire watches. You might find it useful to form a fire-watch division.

About four weeks before the ship arrives at the shipyard, the safety officer should meet the shipyard's and SupShip's safety representatives. You must establish the ground rules and a good working relationship with these people. Find out about shipyard safety regulations and what you can do to help enforce them. This also is a good time to discuss hazmat, especially flammable liquids. Some shipyards require you to offload and store most hazmat elsewhere. This is a good idea because it allows you to control what material is brought back aboard. Identify how often hazmat will be picked up; don't let it accumulate.

Organization

Orchestrate all the planning. The safety officer must be aware of maintenance in progress every day. You can use the management-by-walking-around leadership style to accomplish this requirement. The environment changes daily.

One day, it may be safe to weld in a space; the next day, it may not (e.g., someone may have temporarily stored flammable material in the space). It's a good idea to have a ship's safety representative visit all welding sites every day, checking for flammables and fire-watch procedures. The fire marshal also can help

inspect areas. You never can have enough eyes.

Daily walk-arounds are important throughout a PMA. These walk-arounds may be started by the shipyard's safety representative, but a ship's representative should go along each time to answer questions and show an interest in the program.

Good housekeeping and overall cleanliness of the ship is vital in keeping a ship fire-free. Don't let industrial and shipboard trash build up; remove it daily.

A weekly ship's information, training and entertainment TV update (if yard conditions permit) for the crew may be worthwhile. You can discuss what has happened aboard the ship the past week, as well as what is expected next week. You also might toss in a weekend weather forecast and safe-driving pitch.

Supervision

A SupShip representative may be helpful during the first few weeks of a PMA to resolve issues of responsibility for correcting hazards. He usually is more familiar with the contract and requirements that the contractor must meet, while looking out for the Navy's interest.

During our PMA, the shipyard prepared a daily report, which listed discrepancies and who was responsible for correcting them. A copy of this report went to shipyard managers and the ship's CO, XO and me. Progress toward correcting these problems was tracked daily.

There are some advantages to keeping a copy of these reports for several years. For example, they could provide valuable documentation of hazards in case of a lawsuit. Pay particular attention to all these items:

• Ladders that are removed to help people move large items from one deck to another. Temporary barriers sometimes are put up wrong, and handrails aren't always installed.

• Fire-hose hookups to pierside firemains that run throughout the ship. Bends greater than 90 degrees will restrict water flow.

• Welding cables that chafe on sharp edges or that might get cut when doors and hatches are closed.

• Cables and tubing that are required to have quick-disconnects within 15 feet of any fire boundary through which they pass.

• Access trunks and hatches that usually are closed but may remain open during a PMA. Safety nets and chains must go up and stay up, except in machinery spaces. Yard workers often take down the nets and chains several times a day to move equipment and frequently don't put them back. Navy standards call for the safety nets to be installed in access trunks at a minimum vertical distance of every 17 feet.

• Cables and hoses on the deck that crew members might trip over. This equipment should be tied to the overhead. Don't let it become a hanging hazard, either. Don't place ventilation hoses so they obstruct passageways or ladders.

• Fire lanes that vehicles can use for emergency access to the ship from the pier. If your ship has a large internal space, such as a hangar bay, keep a fire lane open there, too.

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• Compartments that are going to be painted. Before painting, use fire-retardant paper, set up blowers (approved for possible flammable environments) for exhausting fumes, make sure PPE is available, and notify the gas-free engineer. Also make sure people are trained in and wear the correct level of airline respirator.

• Void and tank entries that should be monitored.

• Hot-work sites that must be located and controlled.

Sailors seem to forget most of what they knew about going to sea after just a few months in a PMA. This problem is increased by the fact that large turnovers in personnel usually occur during extended in-port periods. One of the best ways (and a requirement by some type commanders) to get ready for sea is to have a fast cruise and safety stand-up. Concentrate on equipment operation, fire and flooding drills, and missile hazards. It's amazing how many things have to be secured for sea.

At the time the then-LCdr. Hase wrote this article, he was serving aboard USS Iwo Jima *(LPH-4).*

Resource:

• Safety in an Availability Shipyard Links (SIMAs/Repair Facilities, Government Offices, Shipyards), http://www.safetycenter.navy.mil/afloat/surface/shipyardlinks.htm